1: Spier E-5 (1918) 1928
NT14 Plateau Yumans NT14
Havasupai

INTRODUCTION

Territory

The territory of the Havasupai in north-central Arizona comprises the broad drainage area of Cataract Canyon and the bottom of that gorge itself. From the viewpoint of the Havasupai village in the canyon bottom, this drainage area is a high plateau. It extends from the east where the benches of Coconino Basin give toward the Little Colorado River, to the Aubrey Cliffs on the west, these marking the descent toward the Colorado River. The northern edge of the area is the rim and the broken ledges of the Grand Canyon: the southern limit is marked by the heights of the San Francisco Peaks and Bill Williams Mountain, beyond which the country falls away to the south. This forms a winter range some ninety miles by seventy-five. 131 133

Cataract Canyon cuts across this plateau from Bill Williams Mountain on the south to the Grand Canyon. Near its northern end it is, like the Grand Canyon, a double gorge; first a mile wide canyon through the white limestone some twenty-five hundred feet deep, and then a narrower gorge three to five hundred feet deep, winding through the red sandstone in the bottom. The Havasupai village is located about six miles from the mouth of Cataract Canyon at the widest point in its bed where it is a quarter mile across. The bottom lands between the talus slopes are, however, only five hundred acres in extent. In effect the village is shut in on all sides by towering cliffs which can be scaled in but a few places. Northward, the canyon drops away by a series of nearly impassable falls to join the Grand Canyon. Beyond that lies mile on mile of broken ledge and mountain to the northern rim of the Grand Canyon. Egress to the south is by way of its tortuous ramified arms: Hualapai Canyon to the west, Lee Canyon to the east, and several more, Moqui Trail Canyon among them, further north. In effect, traveling to the north is next to impossible, and to the plateau above is so difficult as to make the isolation quite complete.

Several hundred yards above the village, Cataract Creek bursts from the bed of the canyon, gathers rapidly in volume, and rushes as a narrow erratic stream for two and a half miles to plunge in three great falls to the Colorado. This section is an oasis: irrigated fields and orchards stretch between the talus slopes; the stream is bordered by a dense growth of willows and cottonwoods; mesquite and other bushes cover the slopes. The red sandstone benches above this are arid except for a few springs, as is the bed of the canyon above the village. Here grow 133 137 [241]

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133 mescal, yucca, and a sparse scrub growth. Still higher is the plateau:
137 at the lower elevations this is covered with sagebrush, chamissa, etc.; at a higher level grow juniper, cedar, and piñon trees; and at the Grand Canyon rim and toward the mountains are pines, spruce, and fir. Water is very scarce on the plateau; springs are found chiefly near the mountains, elsewhere the surface run-off of summer rains and melting snows may be caught behind little dams.

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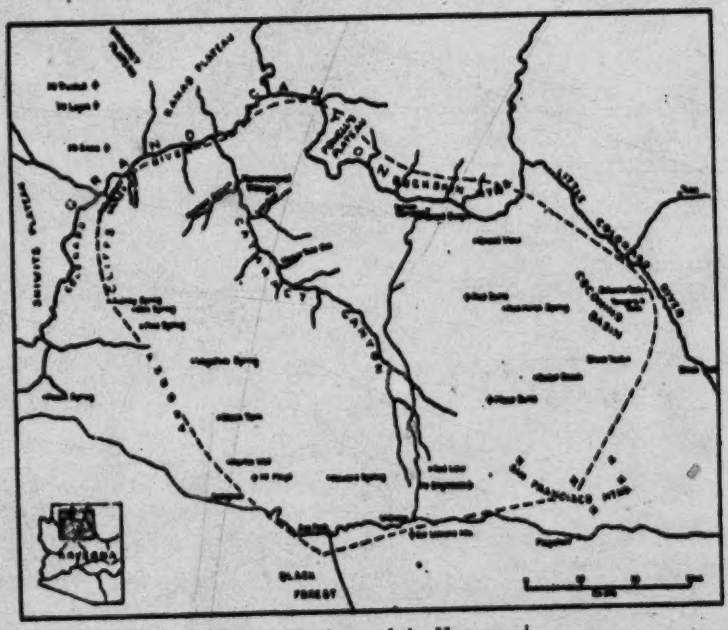

Fig. 1. Territory of the Havasupai.

Precipitation is confined to two periods, the heavy summer rains
132 (July to early October) and the winter snowfall (December and January). Its distribution varies from five to fifteen inches per annum over the greater part of the range to a maximum of twenty-five inches near the mountains in the south. The rains are sudden and torrential and the
132 run-off excessive, the accumulated waters rushing into the lower canyon
731 and producing dangerous flood conditions. I witnessed an unheralded cloudburst in August, 1918, when all the heights spurted torrents upon the village below. Everyone fled to the cliffs; the swollen creek swept

[Text continues on p. 94]

Schiff Y-5 (ca. 1901) 1954 NT14 Plateau Tumsm NT14
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While Eastern construction workers were harnessing Mooney Falls, this load of alfalfa would have brought the woman five dollars

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291

Mescal trimmed for the roasting pit. Pick is used to pry plant from the ground. Hatchet-like knife is used in trimming

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American Museum of Natural History

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2:Iliff Y-5 (ca.1901) 1954 NT14 Plateau Yumans NT14
Havasupai

fragile as old lace. Branches of trees, roots and trailing vines, heavily encrusted with mineral, hung over and almost concealed the entrances to the caves. We broke off some of these and found the wood, in some instances, still green and alive underneath.

As we continued down the trail we rode to the rim again and again, unable to resist the wild beauty of our river, roaring with such violence through its narrow gorge.

We passed Crematory Gulch, a western branch of our canyon where the Indians had cremated their dead before accepting the practice of burying in a canyon nearer the school. A former employee once told me that he had visited Crematory Gulch and was surprised to find large Navaho blankets, undamaged by fire, medicine gourds, saddles and, most gruesome of all, the partly burned club of a man's graying hair. He fully realized the danger of desecrating an Indian cemetery, but slipped away with a shaman's gourd rattle. At the time he told me of his venture, he was hoping for an opportunity for a second visit, but whenever he made the attempt, an Indian appeared with disconcerting suddenness, and stood, watching, until he gave up the quest.

We rode to the brink to look down on Mooney Falls where the river roared in a solid column over a ledge higher than Niagara. The noise of its crash into the foaming pool below was deafening; the picture it made, hundreds of feet below us, was like a bit of toyland. Mineral accretions were plastered, like the halves of umbrellas, against the sides of the precipice. I knew that just below our feet were the dangling remains of the frail Indian ladder down which Lanoman and his friends had tenderly lowered his young wife to her funeral pyre. There, too, rested the bones of James Mooney, a sailor turned prospector, who with a few companions had tried to descend below the falls to locate abandoned mines, about which he had heard such fantastic tales. The rope they lowered over the precipice had been too short, and Mooney, the first to make the descent, fell to his death. As a tribute to his memory, white people gave the falls his name, but the Indians continued to use "Mother of the Waters." I thought of those two,

3:James T-5 (ca.1900) 1903
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we were riding up or down literal stairways cut in the rock, or rounding "Cape Horns," where we held our breath at the dreadful consequences that would ensue were horse or man to slip. Entering Rattlesnake Canyon our whole course was on a shelving slope of rock, over which even experienced horses tread gingerly. At last we came to the bed of the main canyon, and then for five or six miles we journeyed on, in the sand or the gravelly wash, for the stream that flows through this narrow canyon in storm times has no other law than its own wilful force. To-day we ride in one place, to-morrow's storm changes everything. After numberless twinings and twistings, all of which, however, gave a persistent northwesterly direction to our travelling, we came in sight of a score or so of large and fine cotton-wood trees, whose height far surpassed the smaller mes-quite, cottonwood, and other trees that line much of the canyon's bed. These large trees told us our journey was practically at an end, for here begins the outpour-ing of the numberless springs that make the stream we can already hear rushing in its pebbly bed lower down. Without any premonition they spring out in large and small volume at the foot of some of these trees, and the Havasu — the Blue Water — is made. Every few yards adds to the water's volume, for more springs empty their flow into it. The first and only real buildings are the schoolhouse and the homes of the farmer and teachers, and then, at once, begin the small farms of the Havasupais.

Stand on the slope here, where a mass of talus rises from the trail side, so that we can survey the whole of the picturesque scene. Note its setting! Towering walls of regularly laminated red sandstone, though the

3:James T-5 (ca. 1900) 1903
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342 summer time and thus keep the canyon intensely hot both night and day. The large flow of water and
137 the dense growth of willows and other verdure keep
132 the soil constantly moist, so there is a humidity in the atmosphere which, in hot weather, makes it very oppressive.

132 This moisture renders the canyon cold in winter, although the thermometer never ranges very low. Snow falls but seldom, and then disappears almost as soon as it lights. In 1898 there was snow that stayed on the ground for several hours, but this was one of the severest winters they have had for many years.

133 A hundred yards or so below where the springs commence to flow Wallapai Canyon enters from the left. It is similar in appearance to, though narrower than, Havasu (Cataract) Canyon, the walls being of red sandstone, the strata of which are as regular as if laid by masons. A few hundred yards beyond the junction of
491 the two canyons a remarkable piece of Indian engineer-
499 ing is in evidence, showing how the Indians ascend
133 from a lower to an upper platform. There is a drop here in the stratum of some twenty-five or thirty feet, and to overcome this obstacle the Havasupais built a cage with logs which they filled with stones, and then from this stretched rude logs up and across, to which other logs were fastened, thus making a fairly substantial bridge from the lower to the upper stratum over which their horses as well as themselves could safely pass. The trail from this point ascends through tortuous canyons a distance of seven miles to the territory occupied by the Wallapais.

133 Just below the entrance to Wallapai Canyon a vast mass of talus has fallen, and two hundred yards farther

3:James T-5 (ca.1900) 1903
NT14 Plateau Yumans NT14
Havasupai

515 136 breeding, for they are ubiquitous. Yet, strange to say, I have never known of an instance where a bed-bug has been brought out of the canyon by a visitor. Though I have been with the Havasupais scores of times I never detected one of these vermin either in my clothing or bedding. The breed seems to be peculiar to the warm, moist air of the canyon and to be unable to live away from it, for which we give hearty thanks.

136 Now and again scorpions may be found, and, after a rain, I have seen a score of hundred-legged worms (perfectly harmless) rolled up on the trail between the village and Bridal Veil Falls.

Rattlesnakes are not common anywhere in those portions of the canyon much visited by the Havasupais, but now and then one may be found on the trails or basking in the sun on the rocks near by. Elsewhere in this canyon and its many greater or lesser tributaries they are common, and the Indians can find any quantity if they are sent for them. In all my years of wandering to and fro, though, I have not seen a half-dozen rattlesnakes in Havasu Canyon.

Other pests are mosquitoes, gnats, and a small black fly which, in certain seasons, persistently lodges in the eye, causing considerable annoyance, and sometimes distress and pain. There are not many mosquitoes, though at times they are troublesome enough to satisfy one for their scarcity.

285 [462] Many of the women are expert basket makers, and in my book on Indian Basketry I have fully explained their methods of work and the charming nature of their designs. The Havasu Canyon is a basket maker's paradise, for the stream is lined for miles with willows [137] suitable for this work.

132 slopes where storage granaries were located and where some families occupied caves and rock overhangs until 30 or 40 years ago. The humidity of the canyon makes the comparatively warmer temperatures there less bearable than those on the plateau. This, along with the scarcity of fuel, combined to make the plateau the favored winter abode.
[361]
[221]

137 Botanically, the plateau and the canyon floor represent the extremes within the Sonoran Life Zone. On the plateau, clumps of juniper predominate along with stands of western yellow or ponderosa pine and pinyon pine. Nearer the canyons, trees give way to sagebrush, grasses, yucca, and a variety of wild food plants including mescal. Prickly pear, yucca, mescal, and some of the other food plants of the plateau,are also found on the Esplanade and at lower elevations. The change in vegetation is a gradual one from canyon rim to floor, with desert plants predominating at the lower elevations. Acacia and mesquite, Mormon tea, agave, prickly pear and other varieties of cacti, yucca, salt brush, and numerous grasses from which seeds were harvested, are found at elevations a few hundred feet above and below the canyon floor. [372] Dense willow thickets border Havasu Creek, and this was the predominant fuel plant in the canyon until introduction of the cottonwood as a winter fuel source in early reservation days. Watercress in abundance and many flowering plants grow along the creek bottom and the irrigation ditches. Below the farm area, in places where the stream is impounded behind travertine terraces, cattail and other marsh plants abound, while only a few feet away the usual desert plants make a sharp contrast. [276] Datura (jimson weed) is scattered everywhere in the canyon's sandy soil; the Havasupai have experimented with it as a narcotic but have rejected it.

133 Reservation farms occupy the canyon floor, which is 1/4 to 1/2 mi. in
361 width. Houses are located on individual farms throughout the area. Fields
312 lie on both sides of the creek, occupying about 140 acres of arable land. Fruit trees, still productive, and scars of abandoned fields mark an area below the village which, until about 20 years ago, was well populated. The canyon floor drops in elevation about 150 ft. from south to north in a distance of approximately 2 mi. in the cultivated area.

487 Cataract Canyon formerly was accessible from three directions by means of a half dozen horse trails and several foot trails which entered the canyon close to the village area. Although these old trails are sometimes used at present, the Havasupai more frequently travel the improved Topdcoba and Walapai trails, which are used also for packing tourists and supplies into Supai.

245 Peach trees were introduced prior to 1876 (Whiting n. d., 59), and
177 the similarity of the Havasupai term for them to that of the Hopi demonstrates their Hopi origin (Spier 1946, 124). This refutes a popular notion that John D. Lee, a refugee Mormon, introduced peaches in comparatively recent times. Other orchard crops are pears, apricots, apples, both black and white figs,

THE HAVASUPAI

silla, and blankets is owned individually. Each one can dispose of his 422
possessions independently.

The Havasupai is an excellent horseman and packer. He usually 492
has quite a number of horses and does considerable packing on the trail with them. Traveling up and down the steep winding trail to the top of the canyon is very strenous work for the horses and the Indian must have a sufficient number of them so as to rest each horse for a few days after one of the trips.

When first visited by the white man these people dug holes with 241
stone hoes, planted their seeds, but did little cultivating. Only a small acreage was planted, this being irrigated from small ditches running [215]
from dams of rock, logs, and willows piled in the river. Methods of farming are still simple. The ground is first plowed and then cultivation is done with a hoe; some rotation of crops is practiced from year to year. Irrigation ditches now serve over a hundred acres of land.

The Havasupai are among the most conscientious farmers in the Southwest. Their interest centers so firmly in their fields that when re- [108]
munerative employment is to be had at Grand Canyon the men will leave the work with semi-monthly pay to plant and tend their crops. Planting begins in the middle of April, but previously the fields are cleared of weeds and brush, plowed with a one horse walking plow, and irrigated two or three days before planting.

The tools used are a planting stick about an inch wide and a foot 241
and a half long with one end cut wedge-shaped, and a modern hoe with 412
a blade at an angle to the handle. Formerly a wooden spade-shaped hoe with an extra long handle was used; also, the shoulder blade of a [237]
horse was held in the hands and used to scrape the sand out of irrigating ditches and for scraping out weeds.

Planting is an occupation that most of the family takes part in; 241
even the small children help dig holes. The corn is not planted deep, about three and one-half inches is the usual depth. The lines for the rows of hills are generally drawn with the foot. Kneeling, the first hole is dug with the planting stick; the soil is loosened, and eight or ten seeds dropped in. However, before putting the kernels in the first hole the planter says a prayer. Filling the hole, he takes two or three short steps forward, kneels, digs a second hole, and plants. This he continues until the field is planted.

The planting is not all done at one time but extends over a period of two months. Beans are planted on the same day as corn and placed half way between the corn hills. Both crops ripen about the same time.

When the young corn shoots are about two inches above the ground, they are given a second watering. When the tassels appear, about two and a half months after planting, the corn receives a third and last watering. The fields are weeded at regular intervals and traps are placed for rodents which would otherwise destroy a portion of the crops.

The Havasupai plant a small variety of corn, with ears about six [137]
inches long, known as Mohave corn, which will yield ears in about two months. Other varieties ripen at intervals from mid-August until the last of September. When the ears are ripe, they are gathered in burden baskets. The gatherer breaks off the ears and throws them in the basket on his back while he walks along. The corn is dried on the 251
roofs or on brush heaps. It may be placed in the storage chambers either in the form of husked ears or shelled and piled in a corner. Seed corn is always husked and heaped in a separate pile in a corner. Watermelon, pumpkin, sunflower, and squash seeds are dried, put in cloth sacks and stored in the storage chambers. Beans and corn ripen at the same time and those beans not eaten green are dried and stored in stone chambers for winter use.

The Havasupai have innumerable ways of preparing corn. Only 252

12: Cushing E-4 (1881) 1882
NT14 Plateau Tumans NT14
Havasupai

THE NATION OF The Willows. II.

THE HOME OF THE NATION.

175 More than three hundred years ago, one of Coronado's lieutenants, at the head of a little band of soldiers, crossed, to the northward, the deserts beyond the province of Tusayan, and after many days came to the brink of a tremendous chasm, which the modern explorations of Major Powell have shown to be, in some places, more than a mile in depth. These Spanish adventurers were worn out with exertion, famished for want of water, and foot-sore, as nearly all of their animals had perished. They paused upon the brink, unable to descend, unable to slake their burning thirst in the waters of the river, which, as they described it, "though grand, looked like a thread of silver, so deep down was it." This river they named El Rio Tizon, but afterward it was called the Rio Colorado Grande, a name which is still retains.

131 The Nation of the Willows make their home in one of the side cañons of this great river, near the middle of the western half of the Grand Colorado Plateau, in the gorge of Cataract Creek, a natural cellar (if we may be permitted the comparison), half a mile in depth. That portion in which their village stands is only seven miles due south from the Grand Cañon, and about one hundred and fifteen, as the crow flies, north from Prescott, Arizona. A glance at any good map will convince the unversed reader that Cataract Creek Cañon is almost in the centre of an immense desert, — desert only because of the absence of perennial water, but covered by a grand growth of pines, pifions, cedars, and junipers, and by flowering plants and luxuriant grasses of many

● [137] varieties.

[P. 541 A]

[pp. 376 – 540 not processed

12: Cushing E-5 (1881) 1882
NT14 Plateau Yumans NT14
Havasupai

The Nation of
THE WILLOWS.
II

500 variation. Upon this strange desert,
132 some sixty-six hundred feet above the
level of the sea, considerable rain falls
during latter July, August, and Septem-
ber; and with the end of November
heavy frosts begin and snows ensue, oc-
curring with greater or less frequency
and severity of cold throughout the
larger part of the winter. During the
136 latter season, these vast plains, undula-
tions, and forest mesas are filled with
game of the nobler sort, such as deer,
elk, antelope, and bear; followed by the
constant coyote and fox, "the herds
and herders of the Ha-va-su-pai," as the
Zuñis say. Quite different is the Cata-
133 ract Cañon itself, situated only thirty-
five hundred feet above the level of the
sea, the occupied portion of which is
more than three thousand feet below
the surrounding desert, — a veritable
perennial oasis, with almost subtropical
climate and luxuriance of vegetation,
with a clear, cold, never-failing, impet-
uous stream cleaving its way through
the little plain at the bottom of the
cañon, the waters of which are strong-
ly impregnated with carbonate of lime.
192 The atmosphere is as moist, warm, and
temperate as that of the surrounding
waste is arid and extreme. Frosts rarely
and snows never visit its little plains,
and even the quietest pools along the
rushing little river are never fettered
by ice. The agave, or century-plant,
● 137 which nowhere appears on the sur-
rounding plains, reaches almost giant
proportions in its valleys, furnishing the
[273] material for the mescal, or *ai-su*, so
abundantly prepared by the Ha-va-su-
pai, and so well known among the more
southern tribes of the territory and of
Old Mexico. Apricots ripen in June,
peaches in July; corn is gathered and
[262] eaten during both months, and again
planted, to ripen during September and
[P. 541B] October.

070
136 October. Quail and smaller birds, rabbits, squirrels, and a few burrowers constitute the sparse fauna, although along its unscaled cliffs still wanders the bighorn, or *Ovis mexicana*. No fish or aquatic animals, save the Gila monster and a few lizards, appear. Luxuriant
● 137 vines and shrubbery; willows, cottonwoods; flags, tules, and other aquatic plants, with a marked absence of grasses, save a kind of cane along the river, and of flowering plants, with here and there the amole, or Spanish bayonet, and agave, — these make up the richly growing but unvaried flora.

487
133 Only two trails descend this cañon: the one from the southeast, — by which we entered, — with a southern branch, over which the cavalry had passed; the second from the southwest, winding and climbing through a mass of side cañons, a wonderful example of Indian engineering skill, unsurpassed in grandeur, difficulties, or dangers. The passage of either of these trails, especially of the latter, requires the greater part of the day. From the entrance at the head of the little side cañon, tending down from the southeastward, through which the first-described trail leads, forty turns are made, each one leading further downward, and revealing entirely new views of the indescribably grand and beautiful rock scenery. During all this passage of more than twenty miles, scarcely a place is encountered that a stone's-throw or an arrow-flight would not span, notwithstanding the depth gradually increases to three thousand feet. In some places the rocks overhang the traveler's head on either side, leaving only a narrow strip of sky, while at others the opening assumes a funnel shape: the gray lime sandstone, which forms the upper half of the rock walls, gradually slopes back a quarter of a mile, where it suddenly ascends in a rugged series of promontories, buttes, and cliffs; the red sandstone, which forms the immediate cañon-border, more obdurate, re-

[P. 542A]

[87] tains its primitive narrowness and an-
133 gular beauty, only here and there worn by the blasts of rain and wind and sand. These features are characteristic until the last turn reveals a bending plain, in no place exceeding half a mile in width, formed by the junction of the lesser southwestern cañon with the main southeastern, and reinforced by the wearing of the emerging river for ages, — and this is the sandy, loamy plain where the Ha-va-su-pai or Kuhni kwe dwell,
133 and the groves of cottonwood and willows grow. Below the little village,
[36] which numbers about thirty-five huts, are four beautiful cataracts, from which the stream derives its American name. The first two are inconsiderable, although beautiful, sheltered as they are
[37] by thrifty, irregular growths of cottonwood and willow, the forms of which are reflected, and torn into a thousand fragments of green and silver, by the rippling, boiling, surging, rushing waters. The geologic history of these two is repeated in a third and grander fall, a mile or two below the head of the village. Huge rocks have tumbled down to the very water's edge from the cliffs on either side, which here almost meet each other, leaving only a broken path on the eastern bank, difficult for the passage even of foot travelers. The unaided waters have built for their own adornment a horseshoe-shaped, overhanging dam of carbonate of lime, three hundred feet in height, filling in the basin above, to the very surface of the pool, with a confused jumble of petrified trees, mosses, ferns, flags, and what not, preserving only one deep, narrow, serene channel through the middle. And from their stony, dead ancestry spring ever fresh trees, mosses, ferns and flags; their rootlets and dead leaves continually changing to stone, their branches shooting upward to form a network so green and massive that it hides the waters which are at once their life and destruction. Over the top and very

/98 cont./

101 water; vasú, blue; and apá, man; and was first applied to them by the Walapai and other Yuman tribes, who had been impressed by the peculiarly transparent blue of the stream flowing through Cataract Canon. By several neighboring tribes and by early writers the Havasupai were called Coconinos, or Cohoninos. This is undoubtedly a Hopi word, for the Hopi still call them Kolfunína, which, they say, is from kóhu, wood, and nína, kill, hence "Wood-killers," referring to the former Havasupai custom of breaking off limbs of trees for firewood with clubs. The name survives in that of Coconino county, Arizona.

[313]

133 and which makes life possible in the depths of the gorge, flows through the length of the little garden spot, then in a cataract leaps from the floor of the cañon to be caught in a pool below.

137 While the brink of the cañon lies in the high plateau region, the land of the piñon, cedar, and pine, the home of the Havasupai is in almost a subtropical spot that produces luxuriant

771 vegetation with fruits of several kinds. Ask a Havasupai whence came these fruits and vegetables, and he will tell you, "God brought them, all but the figs." This frank expression as to the origin of his garden products reflects a Havasupai peculiarity. Ordinarily Indians will not mention their gods by name, but the Havasupai discuss them with the same familiarity that they would their neighbors. With them, as indeed with all Indians, everything animate and inanimate is of divine origin.

773 199 Havasupai mythology differs but slightly from that of the parent stock, and the difference in language is dialectic only.

174 144 Notwithstanding the similarity in myth and language, the separation must have occurred at a very early date, for in their features the Havasupai bear little resemblance to the Yuma or the Mohave.

[142] They are below the average Indian in stature, while the Mohave and the Yuma are far above.

161 /99/ In 1903 the Havasupai numbered about 250, but in three years disease has diminished their population to 166. The